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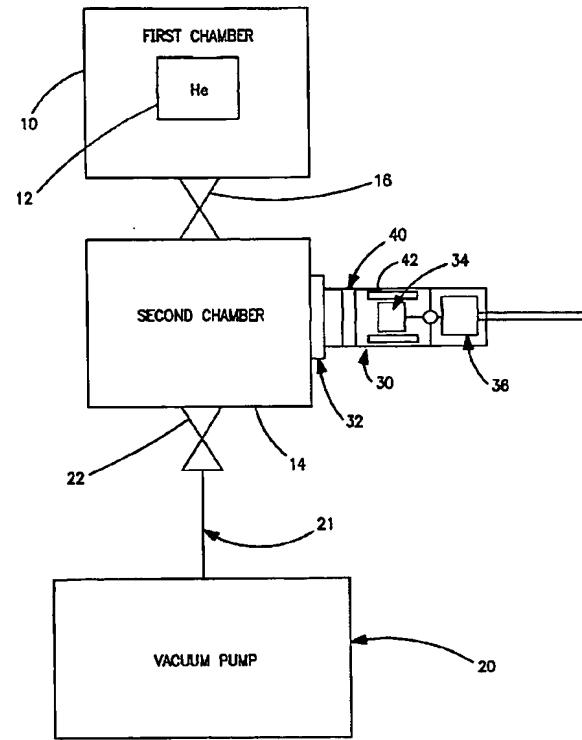
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- (71) Applicant (for all designated States except US): VARIAN, INC. [US/US]; 3120 Hansen Way, D-102, Palo Alto, CA 94304 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): PERKINS, Charles [US/US]; 109 Beacon Street, # 1, Boston, MA 02116 (US).

[Continued on next page]

(54) Title: METHODS AND APPARATUS FOR DETECTION OF LARGE LEAKS IN SEALED ARTICLES



(57) **Abstract:** Methods and apparatus are provided for detection of large leaks in sealed articles. Apparatus for leak detection includes a first sealable chamber configured to receive a test piece containing a trace gas, a second sealable chamber, a first valve coupled between the first and second chambers, a leak detector having a test port, a trace gas permeable member coupled between the second chamber and the test port of the leak detector, a vacuum pump having an inlet, and a second valve coupled between the second chamber and the inlet of the vacuum pump. The permeable member may be quartz, which is permeable to helium when heated. The leak detector may be an ion pump or a helium mass spectrometer leak detector.

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